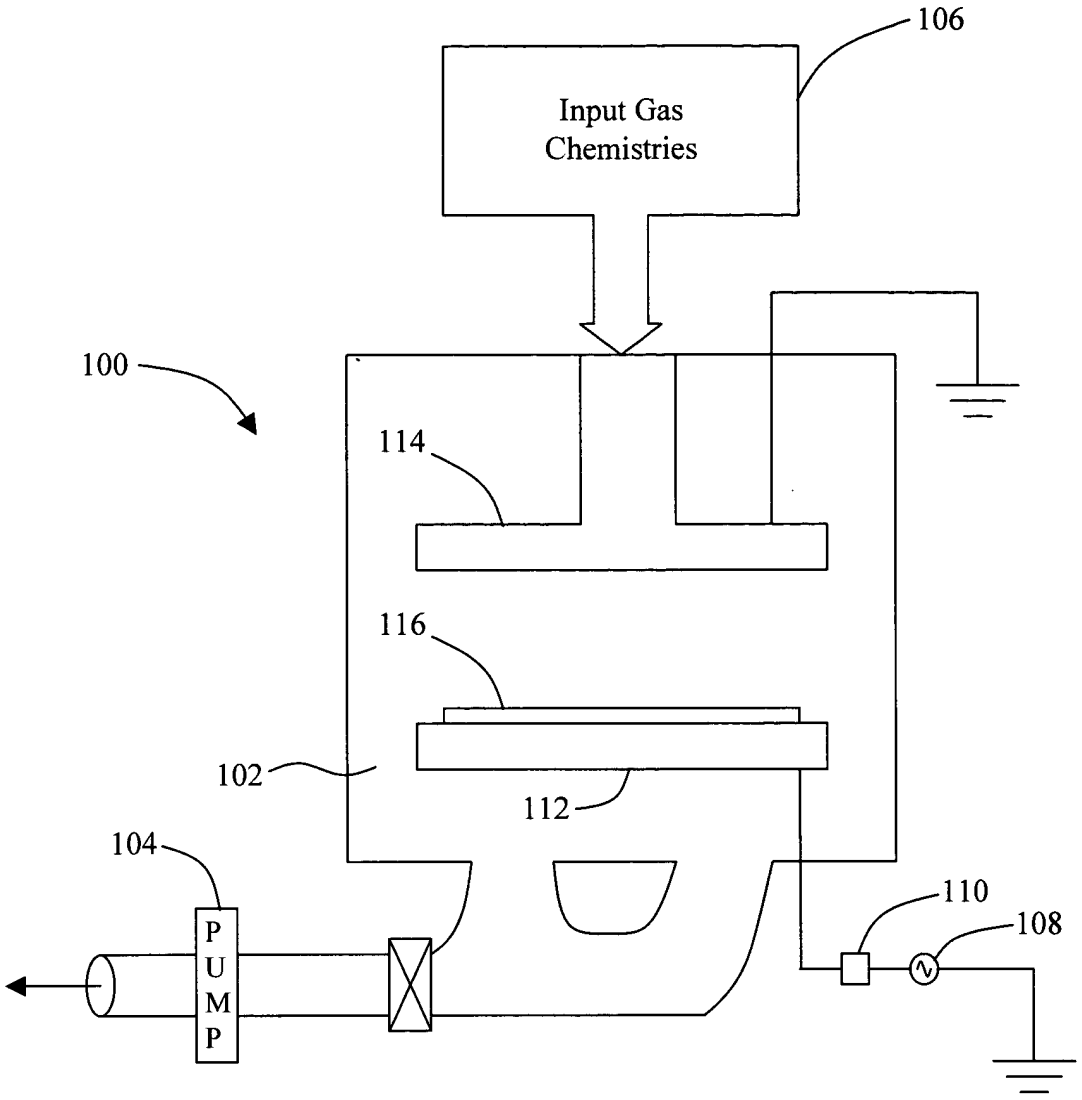
106
Input Gas
Chemistries
100
114
116
102
112
104
P
U
M
P
110
108

FIG. 1

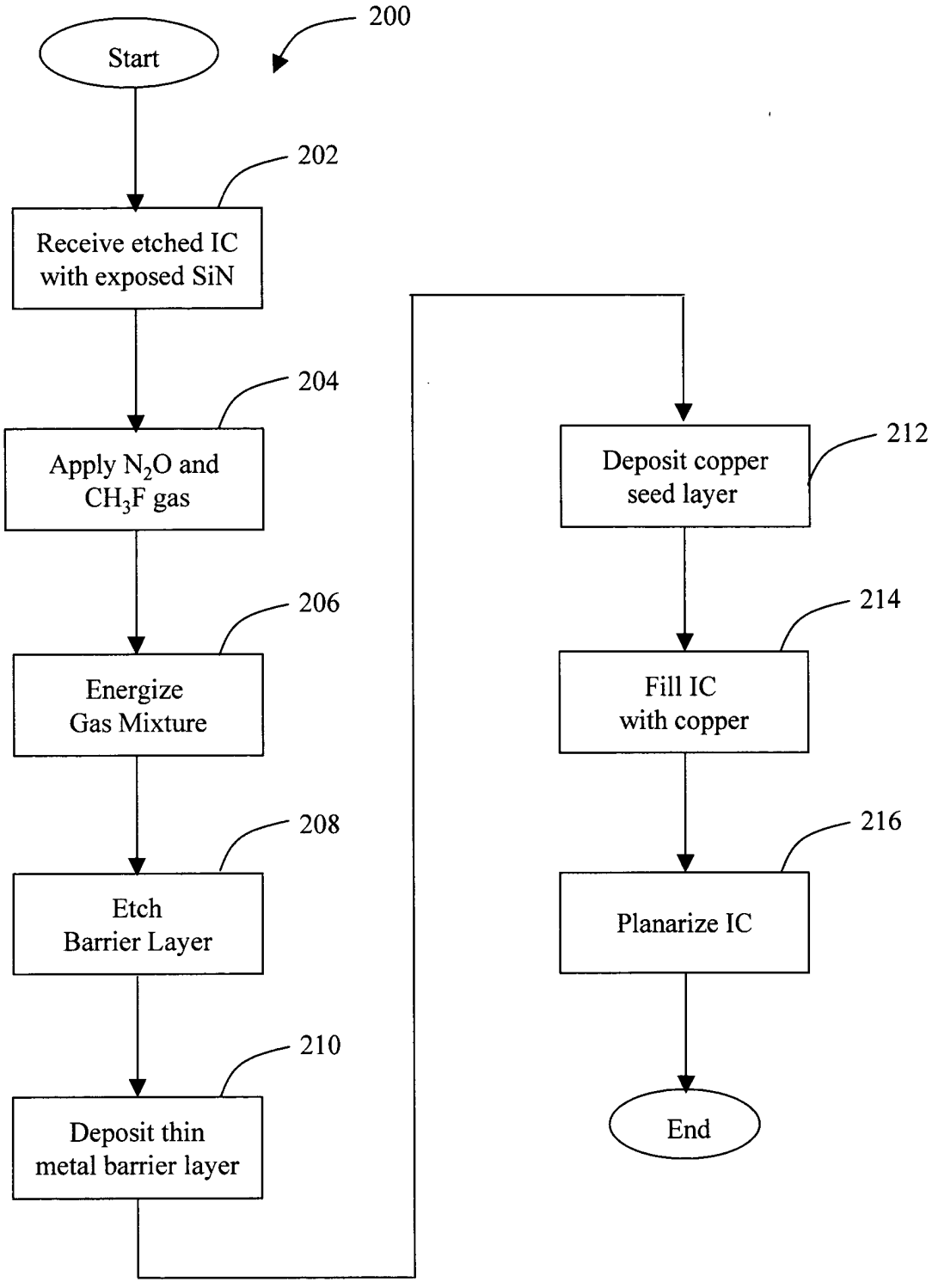
200
Start
202
Receive etched IC with exposed SiN
204
Apply $N_2O$ and $CH_3F$ gas
206
Energize Gas Mixture
208
Etch Barrier Layer
210
Deposit thin metal barrier layer
212
Deposit copper seed layer
214
Fill IC with copper
216
Planarize IC
End

FIG. 2

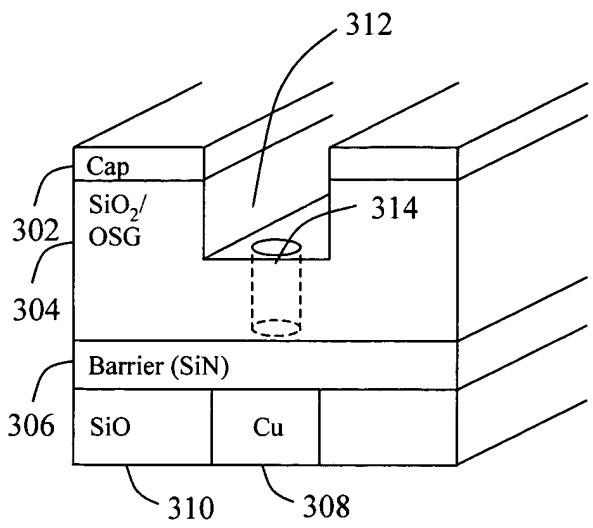


FIG. 3A

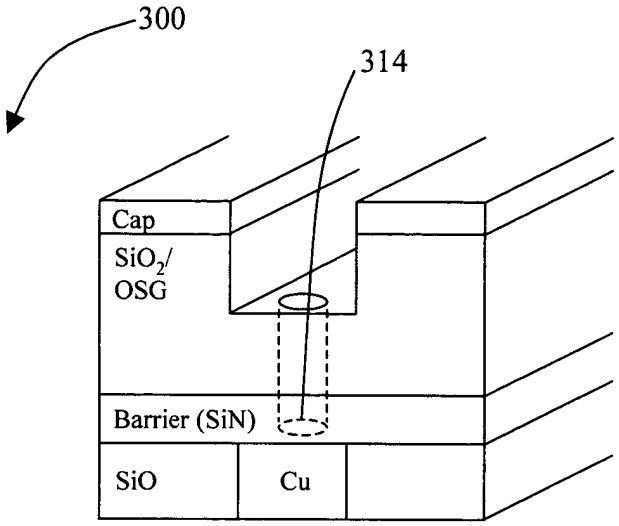


FIG. 3B

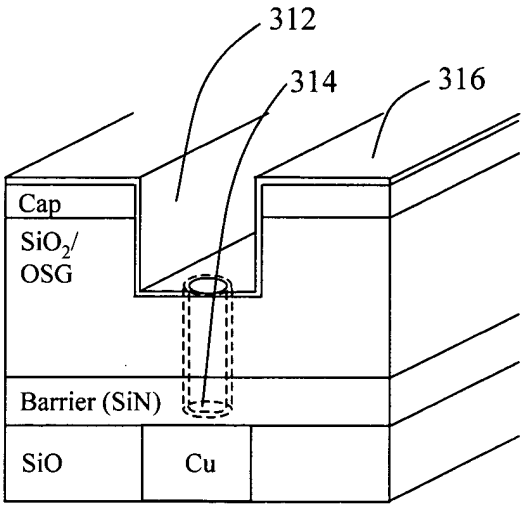


FIG. 3C

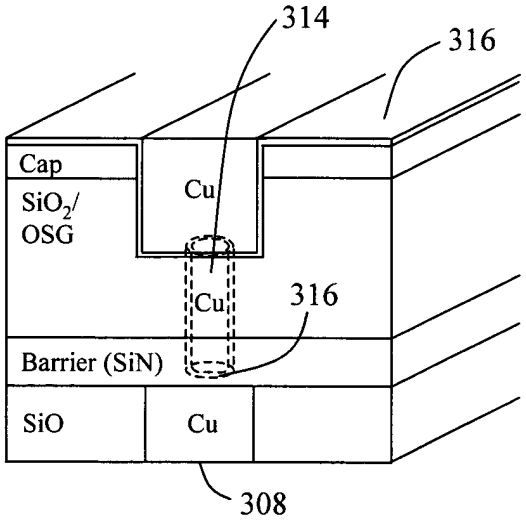


FIG. 3D

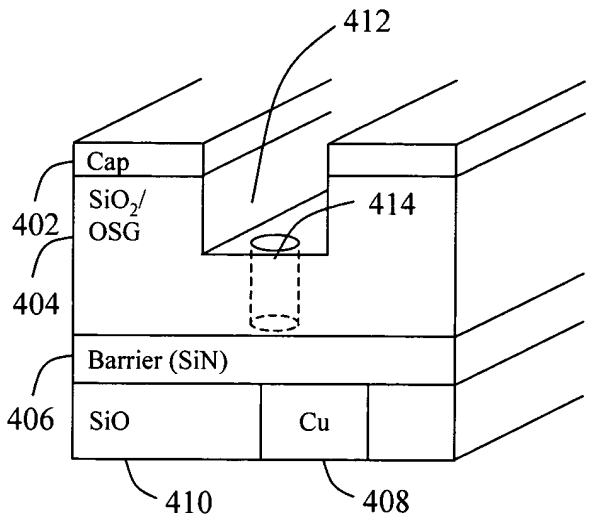


FIG. 4A

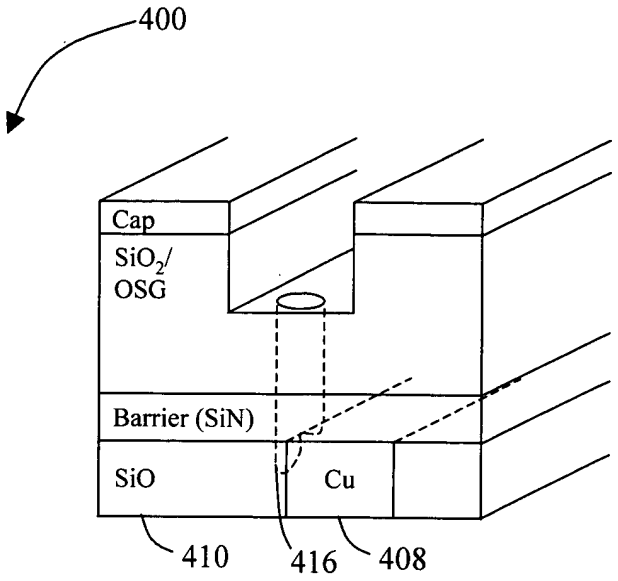


FIG. 4B

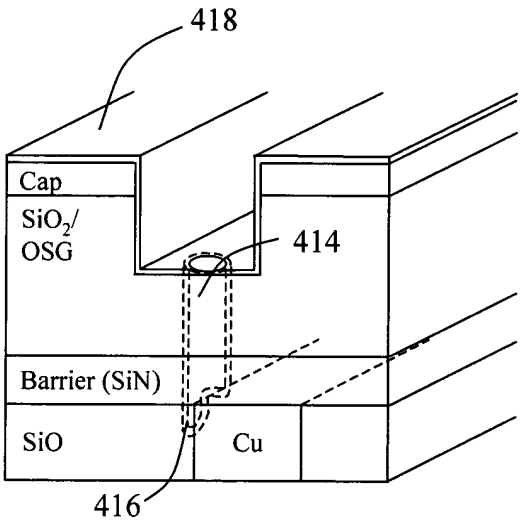


FIG. 4C

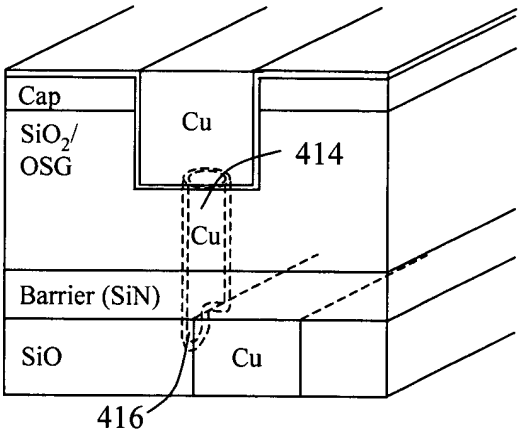


FIG. 4D